

ABSTRACT

There are provided a NO_x storage reduction catalyst which is provided in an exhaust passage for an engine, and a sulfur concentration sensor which can detect a total concentration of SO_x and H₂S in exhaust gas that has passed through the NO_x catalyst, and a concentration of SO_x in the exhaust gas. An operating state of the engine is controlled such that SO_x is released from the NO_x catalyst (sulfur poisoning recovery process). When a concentration of the hydrogen sulfide obtained based on the total concentration and the concentration of SO_x that are detected by the sulfur concentration sensor during the sulfur poisoning recovery process exceeds a permissible limit, an operating state of the engine is controlled such that the sulfur oxide is released from the NO_x catalyst, an amount of the released sulfur oxide is in a predetermined range, and the concentration of the hydrogen sulfide is reduced.

15 Selected Drawings 10A & 10B